MORINGA OLEIFERA
THE MOST USEFUL PLANT ON EARTH
Moringa Chatter & Merch®

Copyright 2014   ALL RIGHTS RESERVED
# TABLE OF CONTENTS

## USES OF MORINGA OLEIFERA

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Purification</td>
<td>3</td>
</tr>
<tr>
<td>Protein and Calcium</td>
<td>5</td>
</tr>
<tr>
<td>Complete Nutrient Source</td>
<td>7</td>
</tr>
<tr>
<td>Medicine</td>
<td>9</td>
</tr>
<tr>
<td>Antidiarrheal</td>
<td>11</td>
</tr>
<tr>
<td>Drought Starvation</td>
<td>13</td>
</tr>
<tr>
<td>Antibiotic</td>
<td>15</td>
</tr>
<tr>
<td>Breast Milk</td>
<td>17</td>
</tr>
<tr>
<td>Mosquito</td>
<td>19</td>
</tr>
<tr>
<td>Blindness</td>
<td>21</td>
</tr>
<tr>
<td>Dewormer</td>
<td>23</td>
</tr>
<tr>
<td>Soap</td>
<td>25</td>
</tr>
<tr>
<td>Oil</td>
<td>27</td>
</tr>
<tr>
<td>Antifungal</td>
<td>29</td>
</tr>
<tr>
<td>Animals</td>
<td>31</td>
</tr>
<tr>
<td>Gardens</td>
<td>33</td>
</tr>
<tr>
<td>Inflammation</td>
<td>35</td>
</tr>
<tr>
<td>Cancer</td>
<td>37</td>
</tr>
<tr>
<td>Diabetes</td>
<td>38</td>
</tr>
<tr>
<td>Hypertension</td>
<td>39</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>40</td>
</tr>
<tr>
<td>Asthma</td>
<td>41</td>
</tr>
<tr>
<td>Ulcers</td>
<td>42</td>
</tr>
<tr>
<td>Osteoperosis</td>
<td>43</td>
</tr>
<tr>
<td>Alzheimer’s</td>
<td>44</td>
</tr>
<tr>
<td>Carbon Sequestration</td>
<td>45</td>
</tr>
<tr>
<td>Pollination</td>
<td>46</td>
</tr>
<tr>
<td>Areas of Interest</td>
<td>47</td>
</tr>
</tbody>
</table>
It’s amazing that Moringa seeds purify contaminated water so effectively, the American Chemical Society has joined the many organizations validating this claim. By crushing the seeds into powder and adding to a polluted water source, they act as a coagulant, attaching to heavy metals, as well as bacterial, viral, and parasitic organisms, sinking them to the bottom, and leaving purified drinking water at the top of the container.

By planting several trees per person, there would be adequate seed harvest for daily purification, as well as a stockpile for use during drought season. This is particularly important as the dry season turns water muddy and parasitic, forcing people to embark on water seeking journeys in the scorching heat.

Even more exciting, are the recent scientific developments exploring the use of sand in combination with Moringa seed powder, which allows this purified water to be stored for long periods of time while maintaining purity. This discovery makes Moringa tree benefits even more dramatic for human and animal survival. When humans have a dependable and free system for purifying water at any location, they are spared the suffering and death caused by contaminated water. There are at least thirty different protozoan, parasitic, bacterial, and viral diseases contracted by contaminated water.

Furthermore, Moringa seeds replace commercial purifying substances that are expensive and harmful to people and the environment. Clean drinking water is a human right. It is unacceptable for our fellow humans to be drinking mud. Moringa seed and sand purified water is a permanent solution to this complex problem, and will help eliminate suffering, death, and many horrific diseases.
Science Alert 2015
This Ancient Egyptian Practice Can Cheaply Purify Dirty Water
“The seeds of the Moringa oleifera tree have been used to purify water and clean crockery since the days of ancient Egypt…”

International Science Times 2013
Moringa Tree Seeds Build Better Water Purifiers, Could Provide Clean Drinking to Impoverished Nations
“Seeds from the Moringa tree could replace conventional synthetic compounds used to purify water, according to research from Uppsala University, Sweden.”

American Chemical Society 2012
New American Chemical Society Podcast: “Miracle Tree” Substance Produces Clean Drinking Water Inexpensively and Sustainably
“The new water-treatment process requiring only tree seeds and sand could purify and clarify water inexpensively and sustainably in the developing world…”

Journal of Materials Science and Engineering 2011
Heavy Metal Removal in Aqueous Systems Using Moringa oleifera
“Current advanced models used in bioadsorbent studies are presented as a powerful tool for understanding multiple interactions occurring in aqueous systems during the removal of contaminants using Moringa oleifera…”

Science Direct ELSEVIER 2013
Structure of Flocs of Latex Particles Formed By Addition of Protein from Moringa Seeds
“Proteins extracted from the seeds of Moringa trees are effective flocculents for particles dispersed in water and are attractive as a natural and sustainable product for use in water purification.”
Coined the “meat and milk tree” due to its year-round abundance of leaves and seed pods that are a cell-ready, ninety-two nutrient meat and milk mimicking food source. Amazingly, Moringa is a complete protein. The leaves are 40% protein, comparable to the soy bean- but with no known allergies, and is one of the rare plants containing all eighteen amino acids, the building blocks of protein. Moringa also has several unique nutrients typically found in meat, including high levels of vitamin B12, vitamin D3, creatine, and zinc.

After receiving “Botanical of the Year” award in 2008, the National Institutes of Health stated, “Moringa is a nutritious substitute for milk” due to high calcium content and the presence of all 16 essential nutrients found in milk. And as if that weren’t enough, Moringa seeds are then pressed to obtain an oleic acid oil similar to olive oil, a treasured commodity dating back thousands of years, providing omega three, six, and nine fatty acids found in foods like salmon and nuts.

Gram for gram, powdered leaves have fifteen times more calcium than milk, nine times more protein than yogurt, twenty-five times more iron than spinach, ten times more vitamin E than almonds, fourteen different kinds of fatty acids, and many additional nutrients. After the leaves are stripped, they grow right back, even during drought season. Moringa is one of the fastest growing and replenishing trees in the world, which means it provides a fresh food source year-round to fill hungry stomachs, and provides a nutrient profile rivaling western diets.

This milk and meat tree is a powerful solution to protein energy malnutrition, the type of malnutrition that causes bloated bellies, orange hair, and death.
THE SCIENCE

International Journal of Nutrition and Food Sciences 2015

Moringa oleifera

“The results of proximate analysis revealed the presence of high crude protein and carbohydrate. The leaves also contained appreciable amounts of crude fiber, ash, crude fat and fatty acid.”

Food Chemistry 2014

Chemical Characteristics and Fractionation of Proteins from Moringa oleifera lam. Leaves

“This study indicates that Moringa oleifera leaves have high nutritional value.”

The International Moringa Germplasm Collection 2013

Cool Moringa Research:

“The much lower cost of Moringa means that it is a protein and calcium source that is more inexpensive and with much lower environmental impact than milk.”

International Journal of Scientific Study 2014

Improvement of Protein Energy Malnutrition by Nutritional Intervention with Moringa oleifera...

“The Moringa leaf powder can be effectively utilized for treatment of protein energy malnutrition...”

Journal of Microbiology, Biotechnology and Food Sciences 2011

Proximate Study, Mineral and Anti-Nutrient Composition of Moringa oleifera Leaves...

“The results of proximate analysis revealed the presence of high crude protein and carbohydrate. The leaves also contained appreciable amounts of crude fiber, ash, crude fat and fatty acid.”
Moringa is a spectacular nutrient cornucopia. According to Harvard Medical School, the human body for optimal functioning requires thirty-one different vitamins and minerals to avoid diseases associated with nutrient deficiencies.

Moringa tree parts in their perfection, have thirty of the thirty-one macro and micro nutrients in generally correct ratios, plus 62 more! This explains why the miracle tree is considered to be the most nutrient dense botanical ever documented.

What would a near complete vitamin and mineral source mean to people in the developing world suffering from vitamin deficiencies? The ramifications are breathtaking, as there are hundreds of serious and crippling health diseases associated with these deficiencies. Conditions like intra-uterine brain damage, growth retardation, new born spina bifida, mental illness, deafness, blindness, kwashiorkor, marasmus, anemia, scurvy, and the list goes on and on.

By adding a scoop of Moringa powder to a common low nutrient meal such as porridge, it transforms it into an incredible ninety-two nutrient food source that is superior to vitamin pills and fortified foods. Moringa naturally contains virtually every nutrient needed from A to Z, which means it’s ready for immediate absorption into the body and is 100% bioavailable. Also, Moringa leaf nutrient ratios vary from season to season providing a changing diversified diet over the course of a year.

Vitamin deficiency oppresses people on a massive scale, crippling them, deflating hope, and limiting their ability to work. Moringa is free, accessible, and forever. It will vitally contribute to the prevention of sickness, starvation, and drama that accompanies these deficiencies.
THE SCIENCE

EGYPT INDEPENDENT 2013

Local Scientist Hopes to use Nutrient-Rich Moringa Tree in Subsidized Bread

“A single teaspoon of Moringa powder contains as much vitamin C as four glasses of orange juice, as much calcium as four glasses of milk, the protein of an egg and the potassium of two bananas — plus 10 times the concentration of vitamin A in carrots and 10 times the iron in spinach...”

International Journal of Basic & Applied Sciences 2013

Nutrient Composition and Sensory Evaluation of Dry Moringa oleifera Aqueous Extract

“Dry Moringa leaf extract is rich in essential nutrients...”  “Hence it can serve as an economically nutrient-rich option in the fight against micro-nutrient deficiencies and malnutrition.”

Food and Nutrition Sciences 2013

Nutritional and Clinical Rehabilitation of Severely Malnourished Children with Moringa oleifera lam...

“The supplementation of Moringa leaf powder appears to be effective in improving the nutritional recovery of severely malnourished children.”

National Geographic November 2012

Mighty Moringa

“It’s now being hailed as a way to battle famine and malnutrition...”

Trees for Life Journal 2011

More about Moringa Leaves

“Moringa leaves could practically wipe out malnutrition on our planet.”
MORINGA IS MEDICINE

Nicknamed “Dr. Moringa” due to its status as the most medicinally dense plant on record, many perceive it as a health insurance package in a tree. Used throughout ayurvedic history for hundreds of ailments and prescribed for cancer, high blood pressure, diabetes, ulcers, asthma, osteoporosis, anemia, and hundreds more.

In short, the medicinal potential of Moringa is powerful and well established, which explains the international science explosion exploring its usefulness. Consuming Moringa is like consuming a pharmacy. It enters the body as an adaptogen, revealing what is out of balance, then draws from itself whatever is needed to restore this balance. With a documented 539 medicinal chemical actions, the nature of Moringa is so complex, that analyzing and fully understanding the core components and the incredible synergy that exists between them, may never be accomplished.

Once the core of the body is stabilized, conditions branching off of it are also stabilized. This explains why over time, with the cumulative effect of daily use, people notice a healing of multiple conditions. Some experience full healing of certain issues, while others with more chronic problems, might notice a lessening and long-term managing effect. What does this mean for the poor who can’t afford medicine or health care? It means an inspired improvement in quality of life, a lessening of suffering, and fewer financial burdens created by clinic visits.

In some areas of Africa where Moringa has been widely introduced, health clinics are no longer bustling with patients. Some may even argue that doctors are being put out of business. Moringa stabilizes health, instills hope, and empowers people to manage their own health.
Dr. Duke’s Phytochemical and Ethnobotanical Databases

Chemicals and their Biological Activities in: Moringa oleifera...
(consolidated by Zija International)

- Antiulcer (9)
- Vasodilator (9)
- Hypocholesterolemic (14)
- Antitumor (10)
- Cancer-preventive (19)
- Pesticide (13)
- Antiviral (9)
- Hypotensive (9)
- Diuretic (8)
- Fungicide (8)
- Antiseptic (7)
- Hepatoprotective (7)
- Antiasthmatic (6)
- Antiparkinsonian (7)
- Laxative (5)
- Antiatherosclerotic (6)
- Anxiolytic (6)
- Hypoglycemic (5)
- Antiherptic (6)
- Antihistaminic (5)
- Anti-rheumatic (5)
- Antifatigue (5)
- Antimenopausal (4)
- Sédative (4)
- Antiprostatitic (4)
- Antidepressant (8)
- Cardioprotective (8)
- Antiosteoporotic (5)
- ...and 345 more!

Journal of Medicinal Plants Research 2010

Phytochemicals and Uses of Moringa oleifera Leaves in Ugandan Rural Communities

“Twenty-four medicinal uses of Moringa oleifera leaves were established.”

International Journal of Phytomedicine 2 2010

Medicinal Uses and Pharmacological Properties of Moringa oleifera

“It has an impressive range of medicinal uses...”

Journal of Pharmacognosy and Phytochemistry 2013

Bioprospecting of Moringa: Microbiological Perspective Potential For:

“cardiac and circulatory stimulants, antitumor, antipyretic, antiepileptic, anti-inflammatory, antilucre; antispasmodic; diuretic antihypertensive; cholesterol lowering; antioxidant; antidiabetic; Hepato protective, antibacterial and antifungal activities...”

Journal of Medicinal Plants Research 2012

Medicinal Properties of Moringa oleifera: An Overview of Promising Healer

“Further research on this charismatic healer may lead to development of novel agents for various diseases.”

“This study concludes that Moringa needs legitimate appraisal to establish its pharmaceutical knack in modern medicine.”
MORINGA IS AN ANTIDIARRHEAL

Diarrheal disease causes dehydration, malnutrition, social isolation, and death, and is one of the most serious and complicated problems that people face who live in the developing nations of the world. Sources of diarrhea are varied, making it difficult to prevent and treat.

Moringa is a healing diarrheal medication, with a treasure cove of gut stabilizing electrolytes including potassium, magnesium, sodium, and carbohydrate. This electrolytic balance in combination with the fiber and nutrients of the tree parts, helps maintain a healthy gut. The “Village Volunteers,” a non-profit group in the developing world, stated in their field report that “due to high protein and fiber content, Moringa can play a useful part in treating malnutrition and diarrhea.”

Moringa seed purified water is also a primary diarrhea preventative, but of equal concern are the issues of unwanted parasites and other vectors entering the body through bare feet, river bathing, unwashed hands, and contaminated food. Daily consumption of Moringa leaves and pods will also help manage these intruders.

When people consume daily Moringa for nutrition, they will be thrilled to realize that it is also an anti-diarrheal. This amazing development will spare suffering for everyone, especially babies, both human and animal, as diarrhea is a primary killer of the young. Moringa is an available, simple, and cheap solution for this deadly, complex, expensive and primary problem. The many antidiarrheal elements of Moringa will work together synergistically to empower diarrheal management. This is an incredible gift for people who can’t afford clinic visits or western antidiarrheal products, and are forced to watch helplessly as their loved ones suffer and die.
The methanolic root extract of Moringa oleifera lam 200 (p<0.01) and 400 mg/kg (p<0.001) produced a significant reduction in the severity and frequency of diarrhea, intestinal fluid accumulation, the volume of intestinal content and intestinal transit...

To conclude, the results of the present study indicate that hydroalcoholic extract of leaves of Moringa oleifera possesses’ significant antidiarrhoeal properties, thus supports the traditional use of Moringa oleifera leaves in treatment of diarrhoea.

Present investigation revealed that alcoholic extract of Moringa oleifera contains pharmacologically active phyto molecules with potential anti diarrhoeal properties and can be used as non –specific anti diarrhoeal agent.

Due to high protein and fiber content, they (Moringa pods) can play a useful part in treating malnutrition and diarrhea.
Drought season comes every year, and every year it’s the same suffering for many developing nation people and animals who lack resources. Water sources dry up, food reserves vanish, gardens dry out, and people panic with despair.

The miracle tree is a life-saving solution for drought season, making people less dependent on unpredictable rain cycles and foreign aid. The miracle tree produces fresh leaves during dry season due to its long tap root and underground water source that, according to the *Los Angeles Times*, “Lets the plant soldier through Saharan-scale droughts.”

This fresh, permanent, and quick to grow nutrient source, in combination with leaf powder, purified water, and nutritionally dense edible seed oil, provides a ninety-two-nutrient liquid nutritional for people and animals that can prevent malnutrition and death throughout the year as well as during the dry months. Also, leaf powder, oil, and seeds have a long shelf life. They can be stored and saved for drought season, providing people with a dependable plan for survival. This gift is indescribable, as the anticipatory anxiety of this annual event is crippling.

As the miracle tree spreads across the world, it will also stabilize the environment in critical ways. With the establishment of miracle tree orchards, desertification and deforestation can be reversed, greenhouse gases absorbed at high levels, as Moringa has been studied for its carbon sequestration abilities. Also pollination is propagated with Moringa pollination. Because the wood of Moringa is not a good source of fuel, people will have less incentive to cut the trees for fires, and with Moringa being perfectly edible in the raw form, fires are not even needed.
**THE SCIENCE**

**Feed The Future:**

A Common Tree with Rare Power

Los Angeles Times 2000

A giant tap root lets the plant soldier through Saharan-scale droughts and withstand overly acidic, alkaline or salty soil.

**The Moringa Tree - A Gift From Nature**

"The amazing thing about the leaves of Moringa is that they grow during the dry season and in times of drought, precisely when most other food growth is limited."

**Global Ministries**

The United Methodist Church

Malawi Africa 2012

"Tolerant of drought and poor soil and fast growing, the Moringa oleifera tree is a living miracle."

**L.A. at Home 2011**

The Global Garden: A Drought Tolerant Tree Called Moringa

"Moringa seems too good to be true: a fast-growing, drought-tolerant tree whose leaves, flowers, pods and seeds are not only edible but also highly nutritious."

**www.globalgiving.org**

The Miracle Tree with Tremendous Natural Multipurpose Activities

"It seems to thrive in impossible places and never dies. It is the plant-soldier through Saharan-Sahel-scale droughts, growing up straight and tall like a mast."
MORINGA IS AN **ANTIBIOTIC**

Bacterial conditions cause an avalanche of problems throughout poor nations of the world. A weakened immune system coupled with an unhealthy gut, can manifest an environment of bacterial illness that spirals into diarrhea, fever, and disease. Once contracted, can be difficult to defeat. Prevention is clearly the best option.

The preventive antibiotic action of Moringa is unusually powerful for a plant in its natural form. It is well documented both anecdotally and scientifically, as an effective antibiotic against a range of pathogens. This daily consumed antibiotic arsenal, along with a large ratio profile of immune strengthening antioxidant vitamins like vitamin A, C, E, beta carotene, zinc, selenium and many more found in Moringa, will have a powerful bacterial preventative influence.

Because it’s natural, people can consume it every day, and won’t suffer negative effects as they might with synthetic antibiotics that kill good bacteria and disrupt the microbiota balance in the gut where 70% of the immune system resides. It also won’t end up in rivers disrupting those delicate eco systems.

It’s important to understand that Moringa is not a cure-all, and will not eliminate all bacterial infections, but rather it will significantly _lessen_ the likelihood of contracting illnesses, shorten their length and severity, slow the spread of sickness through communities, and allow people to focus on life instead of fever.

As stated by Louis Pasteur on his death bed. “The microbe is nothing, the terrain is everything.” Moringa creates an unfriendly terrain for germs, by fortifying the defense system of the body, and making it difficult for intruders to enter, navigate, and propagate.
“The results of the present study have shown the potentials of *Moringa oleifera* leaves on chloroform and aqueous extracts used contain bio-components whose antibacterial potentials are highly comparable with that of the antibiotic ampiclox…”

“Most parts of the samples from Punjab region exhibited broad spectrum properties and were comparable with standard antibiotic.”

“Moringa antibiotic activity is clearly the area in which the preponderance of evidence - both classical scientific and extensive anecdotal evidence is overwhelming.”

“Interestingly, different parts from *Moringa oleifera* showed antibacterial activity against multi-drug resistant bacteria…”

“Seed extracts demonstrated a zone of inhibition comparable to that of penicillin and tetracycline.”
MORINGA INCREASES BREAST MILK

Women in the developing world who are struggling with malnutrition and food shortages, can be challenged in producing enough breast milk. Not only do they produce less due to these problems, but the milk they do produce can be nutritionally lacking. Breast feeding drains energy and nutrients from fragile immune systems, and can ultimately force many women to choose between their own survival or nursing their baby. The necessity of early weaning may be necessary to protect the mother as well as the older children who will perish without her. This abrupt stopping of breast milk flow, puts the baby at extreme risk, who may die from infection without a properly balanced post breast feeding food source.

Moringa is an incredible resource for nursing mothers and their baby. So famous is it for mimicking the properties of breastmilk, and for increasing breastmilk production, it is widely nicknamed “mothers best friend” or “mother’s milk.” It even has the specific essential amino acids needed by children for brain development.

Additionally, science and anecdotal testimony defines Moringa as a galactogogue, a substance that has been scientifically proven to increase breast milk production. Because Moringa addresses nutritional deficiencies, as well as works synergistically with an array of medicinal and phytochemical substances, it triggers the body’s natural milk making mechanism, increasing nutrient dense milk production in both people and farm animals who eat Moringa.

An increase in quantity and quality of breast milk lessens starvation for newborns, and an increase in cow and goat milk, stabilizes health for the nursing mothers and baby animals. Once the baby is weaned, Moringa powder can be added to milk, seed purified water, or porridge, to create an excellent nutrient dense weaning food.
Moringa leaf is a food that can increase the production of breast milk. The results showed administration of Moringa powder can increase milk production holding mice significantly.

“Moringa is commonly used in the Philippines as a galactagogue to help breastfeeding mothers increase milk production. This study has proven its efficacy...”

“In Africa one of the many uses of Moringa is as a nutritional food for pregnant mothers, nursing mothers and infants. Moringa has been scientifically proven as a galactogogue. A galactogogue is the scientific term given an herb or food that increases the flow or production of breast milk.”

"At first, when I tried to nurse my son, I was not producing enough milk. Then I started to eat Moringa. After a short while I had enough milk again. We now eat Moringa sauces at least three times a week. Every other time I had a baby, I lost weight during the months I was breast-feeding. This time I have been gaining weight."
“Mosquitos,” a developing world buzz word, with visions of night time feeding grounds for mosquitoes and bugs transporting malaria and other diseases. Wikipedia lists thirteen different deadly diseases that are transmitted by mosquitoes. Although netting has become widely available through humanitarian programs, there are still many people who go without. Also, netting is often removed from the home and used for fishing instead of malaria protection, as the immediate concern of starvation takes precedence over mosquitoes.

Moringa oil is a documented mosquito repellant. Perhaps not as efficient as netting, but will protect people in many ways. When applied to the skin, particularly the ankles and feet where mosquitoes attack first, will protect and decrease bites. If they do occur, the anti-septic and anti-inflammatory pain reducing oil, will immediately begin to soothe and heal potential skin infections.

Moringa leaf and pod consumption will fight off infections and diseases that spread from bites into the blood stream. If people do acquire Malaria, the consumption of the tree parts will create an unfriendly environment for this parasitic intruder, as Moringa is a powerful anti-parasitic substance, and will battle, shorten, and reduce the severity of malaria.

The life of a mosquito begins in water. Moringa oil and leaf juice can be sprayed across water areas to kill larvae at the pupal stage and has no reported negative effects on the environment. This preventative and nearly free intervention, is the most effective and efficient way to manage mosquitoes.
THE SCIENCE

Asian Pacific Journal of Tropical Biomedicine 2011
Larvicidal and Repellent Potential of Moringa oleifera Against Malarial Vector...

CONCLUSION:
“The present study indicates that the phytochemicals derived from Moringa Oleifera seeds extracts are effective mosquito vector control agents and the plant extracts may be used for further integrated pest management programs.”

International Journal of Innovation and Applied Studies 2014
Phytotoxicological Assessment of Moringa oleifera Lam. Against Larvae of Important human Malaria Vector...

“The obtained data indicates that phytochemical derived from Moringa oleifera Lam seed extracts are effective mosquito vector control agent.”

Pakistan Entomologist 2012
Evaluation of Mosquitocidal Activity of Water Extract of Moringa oleifera Seeds...

“The findings of the present study clearly revealed that water extract of Moringa oleifera seeds is an effective agent for the control of C. quinquefasciatus at its larval and pupal stage and exhibits good repellant action...”

International Journal of Pharmacy and Biological Sciences 2013
Anti-Malaria and Hematological Analyses of Ethanol Leaf Extract of Moringa oleifera...

“The results above have shown why ethanol leaf extract of Moringa oleifera have been used in numerous ethnomedicinal practices to combat malaria.”

PLOS ONE 2012
Oviposition-Stimulant and Ovicidal Activities of Moringa oleifera Lectin on Aedes Aegypti (Yellow Fever Mosquito)

“The water- soluble Moringa oleifera lectin is a larvicidal agent against A. aegypti.”
Vitamin A deficiency is a deadly problem for victims who experience it, causing an avalanche of health issues including blindness, eye disease, weakened immune system, an increase in anemia, as well as a whole clinical spectrum of other diseases. Children and pregnant women are particularly prone to these crippling conditions. One study, in the Jama Ophthalmology Journal, reports that half the children worldwide who become blind, die within a year. Vitamin A deprived women may also experience night blindness in their third trimester of pregnancy.

Hero Moringa to the rescue! It’s bursting with a variety of eye health vitamins including ten times the vitamin A of carrots. It also has many other types of beneficial nutrients for eyes like lutein, zeaxanthin, Iron, vitamin C, flavonoids, omega oils for dry eyes, antioxidants, zinc, copper, and complete vitamin B complex. Moringa also has histidine which will lessen allergies and eye itching.

According to the World Health Organization, vitamin A deficiency is a far-reaching problem beyond blindness, and is even now referred to as “vitamin A deficiency disorder,” because of the many serious problems that branch from it. These include higher risk for common illnesses like measles and diarrheal disease. Susceptibility to malaria has also recently been linked to lack of vitamin A.

Daily Moringa intake is an immediate vitamin A source that will provide not only blindness prevention, but will also act curatively for the reversal of existing eye diseases and conditions. Wide spread permanent availability of vitamin A will have radical social implications for any population that receives the gift of Moringa, and distributes it for the benefit of all.
Determination of Carbohydrate and Beta Carotene Content of Some Vegetables Consumed in Kano Metropolis, Nigeria

Analysis of Beta Carotene content of the vegetables used in the study revealed that it was highest in Moringa leaves and least in carrot.

“Thus dehydrated drumstick leaves have the potential to serve as a valuable source of Beta-carotene in the diets of the population in India and other developing countries.”

Bioavailability Trials of B-Carotene from Fresh and Dehydrated Drumstick Leaves (Moringa oleifera)... "It is therefore concluded that in developing countries like India, Sources of Vitamin A Such As Drumstick Leaves are Valuable in Overcoming the Problem of Vitamin A Deficiency...”

"In conclusion, these tropical green leafy vegetables (Moringa oleifera) in unprocessed and processed forms have high levels of many carotenoids, notably beta carotene and lutein.”

Retention and Storage Stability of Beta-Carotene in Dehydrated Drumstick Leaves (Moringa oleifera)

“Both Moringa and the common carrot are diamonds in the roughage department, but Moringa has quadruple the beta carotene, which is good for eyes...”

Thus dehydrated drumstick leaves have the potential to serve as a valuable source of Beta-carotene in the diets of the population in India and other developing countries.”

In conclusion, these tropical green leafy vegetables (Moringa oleifera) in unprocessed and processed forms have high levels of many carotenoids, notably beta carotene and lutein.”
MORINGA IS A DEWORMER

Intestinal worms are a terrible problem for people throughout impoverished areas of the world. Once their gut fills with worms and parasites, they absorb fewer nutrients from their meals. This lessening of nourishment causes weight loss and ill health. Furthermore, de-worming kits are expensive, and most cannot afford them.

Moringa dewormer is here! Amazingly, the leaves and pods of the tree have a long anecdotal history of being an effective anthelmintic de-wormer. This anecdotal history has led to the financing by many international science groups, to the study of Moringa and its effect on intestinal worms. A variety of published studies have reached the same conclusion. Daily consumption of Moringa successfully controls intestinal parasitism. Furthermore, it’s a better option than one-time de-worming kits, as people are exposed *daily*, and need *continual* de-worming. Even with access to clean water purified by Moringa seeds, they will still pick up parasites and worms from many environmental sources.

Use of the moringa tree gives people the capacity to *manage* this problem. Field workers from ECHO, who distributed Moringa, observed a purging of worms after the first Moringa meal, and this cleansing will continue with regular consumption. What a life improving treasure!

Moringa may not be a 100% in regards to worm removal, science is still exploring its impact on a variety of parasites. Based on preliminary scientific studies however, it can be surmised that it will improve the problem in dramatic ways, lessening the suffering, and providing a permanent long term management plan for this starvation causing reality for millions of people.
Conclusion: “It is concluded that the gum of the plant is macrofilaricidal in both in vitro and in vivo, and may provide valuable leads for design and development of new antifilarial agents.”

“Moringa Oleifera as well as vitex negundo leaves extracts showed a remarkable anthelmintic potential against intestinal parasitism. Amongst both extracts, Moringa oleifera showed better activity.”

“The study supports and validates the traditional use of Moringa seed oil and further confirms that the oleic acid present in Moringa seed oil may also contribute to the traditionally claimed anthelmintic activity.”

“There were some accounts of children vomiting worms the first time they were fed Moringa.”

“If eaten raw, pods act as a de-wormer.”
MORINGA MAKES SOAP

Not only are many people unaware of the importance of hand washing, many don’t even know how to wash their hands, much less purchase soap that is costly if seen. Moringa leaves and oil can be turned into a liquid soap cleaning product, that is easy to make, to teach, and to use.

Moringa liquid soap spread on hands and skin for bathing, will not only clean body parts and kill germs as efficiently as western soap, but will also add a medicinal antibiotic, anti-fungal, antiseptic component that will help clear up skin conditions, skin growths, rashes, bug bites, scabies, lice, cuts, scrapes, wounds, and reduce and prevent infections. Washing with Moringa soap will leave an oil residue on the skin that will serve to repel mosquitos long after. For more efficient mosquito coverage and skin management, Moringa oil applied like lotion provides further assistance. Also, by chewing a Moringa twig and using it to scrape plaque from teeth, will release an anti-septic medicinal juice into the mouth to improve oral health. Also, leaf powder is a toothpaste substitute, and will re-mineralize vitamin deprived teeth.

The availability of soap provides significant positive consequences for human health. The Center for Disease Control has said that 50% of all deaths caused by diarrhea are from lack of hand washing. It’s easy to understand how a permanent and free Moringa soap supply is a survival game changer for the underserved. Also, Moringa soap used in rivers will not have a toxic effect on fish and other animals.

Empowering people to be clean, with a clean environment, means fewer airborne diseases, less human to human contact disease, and less diarrheal and respiratory issues that lead to sickness, starvation, and death.
THE SCIENCE

LWW Journal
Dermatitis 2005

Moringa oleifera Leaf Extract as Active Antibacterial Property in a Bar Soap: A Randomized, Double-Blind, Placebo-Controlled Trial

“Hence, it (Moringa) is recommended as a better alternative to commercially available chemical based antibacterial soaps.”

BMC Complementary & Alternative Medicine 2014

Efficacy of Moringa oleifera Leaf Powder as a Hand-Washing Product...

“Four grams of Moringa oleifera powder in dried and wet application had the same effect as non-medicated soap when used for hand washing.”

Asian Pacific Journal of Tropical Medicine 2011

In Vitro Antibacterial Effect of Aqueous and Ethanolic Moringa Leaf Extracts

“The study indicates a promising potential for aqueous and ethanolic moringa leaf extracts as alternative treatment of infections caused by the tested strains.”

Bayero Journal of Pure and Applied Sciences 2010:

Antimicrobial Profile of Moringa oleifera Lam...

“The result of this study have shown the potentials of Moringa oleifera extracts as sanitizers...”

The New Times Rwanda 2013

Potent Medicines Gracing Your Home Compound

“Moringa is sometimes applied directly to the skin as a germ-killer...”
MORINGA SEEDS PRODUCE Oil

Magnificent Moringa seed oil, similar in form to olive oil, is valuable throughout the world, and highly regarded throughout history for its multi-use abilities. Because Moringa seeds come from the most nutrient and medicinally dense tree in the world, the oil contains the same qualities.

Appreciated and treasured, the oil can be used for dozens of life improving measures. It’s a great first aid antiseptic all-purpose, speeding up healing for bacterial and fungal skin infections, burns, eczema, canker sores and pimples; it also provides pain relief, anti-itch, and anti-inflammatory benefits.

Good news! This valuable commodity is free for those who grow Moringa trees. The seeds can be cold pressed or boiled to expel the oil. The “seedcake” that remains after oil abstraction, is then used for easy water purification. It’s also used in soap making by molding into bars when combined with powdered leaves. Moringa oil can be used as a nourishing daily skin oil, lip balm, for cracked and hurting feet from lack of shoes, and for scalp massages to kill lice and other organism that attach to the scalp. As more trees are planted, and more seeds are harvested, unused Moringa oil lasts for years and can be stored for drought season and sold at market for profit.

Family members will reach for the Moringa oil dozens of times a day, for different reasons, many yet to be discovered. Communities will grow accustomed to this free resource that is useful in such a variety of ways, for an array of situations, like machine lubrication, animal care, wounds, sores, snake, bug, or other bites, or as a vaginal lubricant to manage yeast and other infections.
Determination of Antioxidant of Moringa oleifera Seed Oil...

"The oil is good for skin formulation product because of its potent antioxidant inhibition which prevents bacterial infections, reduce inflammation..."

Current Research Journal of Biological Sciences 2011

Chemical Composition and Antioxidative Properties of Seeds of Moringa oleifera...

"Moringa oleifera oil appears to be potentially valuable and might be an acceptable substitute for high oleic oils like olive and sunflower."

Universal Journal of Environmental Research and Technology 2012

Moringa oleifera-The Nature Gift

"In traditional medicines it is used to treat a wide variety of ailments like headaches, worms, diarrhoea, stomach ulcers, skin conditions, anemia, infections, fevers, urinary problems, liver and spleen problems, arthritis and rheumatism."

Journal of Food Composition and Analysis (2002)

Characterization of Moringa oleifera Seed Oil Variety

"The characterization of the oil from the seeds of Moringa oleifera variety PKM 1 showed that this oil could be utilized successfully as a source of edible oil for human consumption. It contains high monounsaturated to saturated fatty acids ratio, and might be an acceptable substitute for highly monounsaturated oils such as olive oil..."
MORINGA IS AN ANTIFUNGAL

Fungal conditions in the developing world, especially in tropical areas where Moringa grows naturally, are major problems that contribute to endless suffering, rampant itching, overcrowding in health care facilities, and are responsible for children missing blocks of school due to lack of fungal treatments. In addition, skin conditions aren’t just a nuisance, they can be deadly, and are accountable for thousands of deaths every year.

Moringa is a documented antifungal, and will have a significant impact on fighting conditions both internally through the blood stream by consumption of leaf powder, pods, and flowers, and externally on the surface of the skin by applying the remarkable seed oil. Also, Moringa leaf powder mixed with water is a soothing substance for soaking effected areas.

Equally critical are the benefits of Moringa liquid Soap for bathing that will begin the healing process, and magnificent Moringa oil applied as lotion after, will finish the job to help prevent future infections. This valuable treatment is convenient and free for those who grow Moringa trees and cannot afford antifungal creams.

In Western Ethiopia, 80% of randomly examined children had at least one type of skin disease. In the same area, 47%-53% of people from two rural communities had some type of skin disease. These skin problems effect quality of life, lead to social isolation, and are particularly severe in children. The introduction of these Moringa resources into society will have far reaching permanent benefits to battle and manage a range of common fungal infections.
**THE SCIENCE**

**AMERICAN JOURNAL OF PHYTOMEDICINE AND CLINICAL THERAPEUTICS**

**2015**

**ANTIFUNGAL EFFICACY OF MORINGA OLEIFERA LAM**

“Both the plant extracts showed antifungal activity...”

**International Journal of Pharmacy and Pharmaceutical Sciences**

**2014**

**PHYTOCHEMICAL ANALYSIS AND ANTIFUNGAL ACTIVITY OF MORINGA OLEIFERA**

“The antifungal activity of Moringa oleifera was clearly shown by the present study against various fungi...”

**Plos One 2015**

**Mo-CBP3, an Antifungal Chitin-Binding Protein from Moringa oleifera Seeds, Is a Member of the 2S Albumin Family**

“Mo-CBP3 is a chitin-binding protein from *M. oleifera* seeds that inhibits the germination and mycelial growth of phytopathogenic fungi. This protein is highly thermostable and resistant to pH changes, and therefore may be useful in the development of new antifungal drugs.”

**Journal of Natural Sciences Research 2015**

**Antifungal Activity of Petroleum Ether Extracts of Moringa oleifera Leaves and Stem Bark against Some Plant Pathogenic Fungi**

“The results obtained suggest that Moringa oleifera can be used in controlling the test fungal pathogens in plants.”

**Science Direct ELSEVIER 2007**

**Anti-Fungal Activity of Crude Extracts and Essential Oil of Moringa oleifera Lam**

“Isolated extracts (of Moringa oleifera oil) could be of use for the future development of anti-skin disease agents.”
MORINGA STABILIZES ANIMALS

Moringa stabilizes animals in the same way it does people, as they require the same vitamins, minerals, and protein, and are burdened with the same worms in the gut and diarrhea that cause starvation and death in humans. Baby animals are particularly prone to starvation due to diarrhea; in some areas of Africa, statistics place the death rate at 50%.

Moringa leaf powder and pods added to animal food and water, will overcome nutritional deficiencies, provide medicine, a daily de-wormer, a natural antibiotic, an electrolyte balanced anti-diarrheal, an increase in breast milk for the newborns, and a weaning food for the young animals. This combination coupled with purified water, becomes a life-saving diet. Animals consuming Moringa will be less prone to disease, health conditions, and will be soothed by the anti-inflammatory arsenal.

Nutritionally and medicinally stabilized animals require less costly veterinarian intervention; they also have been shown to produce more milk, meat, and eggs. Also, Moringa nutrient blocks, similar to salt licks used for cattle, can be made and stored for drought season, and they have been reported in science journals as a nutritional panacea for animals during drought. Another benefit, is that Moringa trees grow very tall. They can be planted side by side in a circular pattern, and fortified with Moringa rope made from the bark, to create a living fence that will provide predator and weather protection during night hours.

Currently, animals all over the world are eating Moringa with amazing results. An array of international veterinary journals have released the findings, and the science is conclusive. Animals and Moringa are a perfect match.
THE SCIENCE

AGRICULTURE AND BIOLOGY JOURNAL OF NORTH AMERICA 2013

Chemical Composition and Some Functional Properties of Moringa...

“The development of *Moringa oleifera* as a new plant in the farming systems of the tropical rain forest of Nigeria could be the panacea for the much needed alternative feed material for increased livestock productivity.”

Turkish Journal of Agriculture and Forestry 2014

Potential of *Moringa oleifera* lam. as Livestock Fodder Crop: A Review

“Moringa is a good alternative for substituting commercial rations for livestock. The relative ease with which Moringa can be propagated through both sexual and asexual means, and its low demand of soil nutrients and water after being planted, make its production and management comparatively easy and particularly promising...”

ECHO 2007 TECHNICAL NOTE THE MORINGATREE

“When *Moringa* leaves constituted 40-50% of feed, milk yields for dairy cows and daily weight gains for beef cattle increased 30%.”

Asian Journal of Animal Sciences 2012

Performance of Grazing West African Dwarf Goats on Moringa Multinutrient Block Supplementation

“Hence, adoption of the *Moringa* multinutrient block feeding technology by small ruminant keepers could be a panacea to the nutritional and health hardships faced by the animals during the usually long dry season.”

Journal of Animal Nutrition 2015

Effects of Substituting soybean with *Moringa oleifera* Meal in Diets on Laying and Eggs Quality Characteristics of Kabir Chickens

“Moringa oleifera can advantageously replace up to 50% conventional and expensive plant proteins sources like soybean in poultry diet especially in village areas.”
Gardening is a key factor in providing food in developing nations. For many poor farmers, it’s a more difficult task than it needs to be, due to lack of resources and education. The costly price tag of soil fertilizers and pesticides, wind erosion and desertification, as well as animal and insect scavenging on gardens, can create an atmosphere of hopelessness.

Moringa is a miracle for poor farmers and the environment because it’s a free and non-toxic alternative to commercial gardening products. It’s intriguing to understand the many ways Moringa can positively impact a garden.

Agricultural journals have published articles highlighting the use of Moringa to increase garden yields. By adding leaves to soil, it acts as a growth hormone, enriching the soil with nutrients, and leading to more productive gardening.

According to the *Greener Journal of Agricultural Science*, Moringa leaf extract can increase crop growth and yields. It also has the potential to “increase root growth as well as plant height for beans and maize.” Once plants emerge from the soil, Moringa oil and leaf juice can be sprayed as a pesticide on new growth to protect them from a variety of insects.

Also, Moringa trees can be planted circularly around gardens and trimmed to proper sun heights for the time of year. This will protect crops from excessive wind and sun damage, give more sun when needed, as well as protect crops from animal foraging. Better fertilized gardens, combined with natural pesticide, and the protection of a living fence, equals greater garden productivity, more nutrient dense soil and produce, and less starvation.
Greener Journal of Agricultural Sciences 2013

Effect of Moringa Extract on Growth and Yield of Maize and Common Beans

“This study showed that use of Moringa leaf extract as a growth hormone will increase crop growth and yields. The extract also showed potential of increasing root growth and plant height of common beans and maize.”

Greener Journal of Agricultural Sciences 2012

Effect of Moringa Extract on Growth and Yield of Tomato

“This from the results of both the greenhouse and field experiments, it may be concluded the higher the frequency of Moringa application, the greater the increase in plant height, dry matter and yield of the crop.”

International Journal of Development and Sustainability 2013

The Potential of Moringa Tree for Poverty Alleviation and Rural Development...

“Moringa tree has been of many uses to the human race ranging from consumption to domestic usage, animal forage, plant manure, bio-pesticide…”

Journal of Agricultural and Crop Research 2014

Comparative Assessment of Effect of Moringa Extracts, NPK Fertilizer and Poultry Manure on Soil Properties and Growth Performance...

“Moringa oleifera which is seen growing commonly around homes and homestead gardens will present a suitable substitute to the chemical fertilizers which are costly if seen.”

Global Journal of Biology, Agriculture & Health Sciences 2014

Allelopathic Effects of Moringa oleifera on the Germination and Seedling Survival of Euphorbia...

“The result from this trial suggests that Moringa oleifera possesses some bio-herbicidal properties that may be used to help suppress Euphorbia heterophylla.” (Weeds of cultivated crops)
The thirty-six powerful anti-inflammatory substances in Moringa are key to understanding its magic. Stabilization of the gut through use of purified water, de-worming, powerful nutrient and medicinal enrichment, a natural antibiotic that will kill bad bacteria but not beneficial flora, and an arsenal of Moringa anti-inflammatories, will balance the gut quickly.

All these components working synergistically together create an inspired preventive anti-inflammatory environment that will fortify the intestinal environment, preparing it to combat Inflammation and diseases. This will have far reaching implications on health, as the gut is where most illnesses, including inflammation issues begin. Understanding the magnitude of strength of Moringa anti-inflammatories helps us to also understand its unusual healing capabilities.

People living in developing nations suffer from inflammation in a variety of ways. Many work in unregulated jobs that cause injury, and other chronic conditions. Moringa will not interfere with acute inflammation necessary for healing of injuries but will help manage unnecessary overreaction of chronic inflammation. Even if people had access to western anti-inflammatory medicines, which most don’t, they ignore the root cause, leaving people with only temporary inflammation management.

Moringa addresses the cause from the core of the gut where most problems begin. Even better, it’s free! Just grow the Moringa tree. People who grow and consume Moringa will receive continual and daily anti-inflammatory benefits for a lifetime, without any concern for organ damage from overuse of western pharmaceuticals.
**Journal of Biomedical and Pharmaceutical Research 2014**

**Antiinflammatory and Antinociceptive Activity of Moringa oleifera**

“50% ethanolic extract of the leaf of plants of Moringa oleifera was found to exhibit significant antiinflammatory activity.”

---

**International Journal of Green Pharmacy 2008**

**Analgesic Activity of Seeds of Moringa oleifera Lam**

“From this study, it can be concluded that the seeds of *Moringa oleifera* lam. possess marked analgesic activity (Pain Reducing) and is equipotent to standard drug (Aspirin) The present study establishes the use of *Moringa oleifera* lam. seeds as regular analgesic.”

---

**Journal of Phytomedicine 2014**

**“Anti-Inflammatory Effect of Moringa oleifera lam. Seeds...”**

“It is concluded that Moringa oleifera Seeds hydro-alcoholic extract and Moringa chloroform fraction were both effective to treat experimental colitis...”

---

**Protein and Peptide Letters Biochemistry and Molecular Biology 2014**

**Purification of a Chitin-Binding Protein from Moringa oleifera Seeds With Potential to Relieve Pain and Inflammation**

“In conclusion, this pioneering study describes that the chitin-binding protein Mo-CBP4, from Moringa oleifera seeds, exhibits anti-inflammatory and antinociceptive properties and scientifically supports the use of this multipurpose tree in folk medicine.”

---

**Journal of Medicinal Plants Research 2012**

**Medicinal Properties of *Moringa oleifera*: An Overview of Promising Healer**

“Amelioration of inflammation associated chronic diseases can be possible with the potent anti-inflammatory activity of Moringa oleifera bioactive compounds...”

(Muangnoi et al., 2011)
New Study Shows Moringa oleifera Scores Highest Antioxidant Content in Food 2012

“In an independent test, Moringa oleifera scored the highest in antioxidant content of any food yet discovered beating the record-holding acai berry by over a 50% margin.”

Oncology Letters 2015

A Potential Oral Anticancer drug Candidate, Moringa oleifera leaf Extract, Induces the Apoptosis of Human Hepatocellular Carcinoma Cells

“These results support the potential of soluble extracts of Moringa oleifera leaf as orally administered therapeutics for the treatment of human liver and lung cancers.”

Trees for Life Journal 2005

Moringa oleifera...

PEER REVIEWED: Johns Hopkins School of Medicine

Cancer Prevention: Since Moringa species have long been recognized by folk medicine practitioners as having value in tumor therapy, we examined compounds for their cancer preventive potential…” (compounds of Moringa oleifera) “Inhibited tumor promotion in a mouse two-stage DMBA-TPA tumor model.”

An International Journal for Lung Cancer and other Thoracic Malignancies 2012

Moringa oleifera: Natural Leaf Extract with Potential Anti-Cancerous Effect on A549 Lung Cancer Cells

“MTT assay showed significant decrease (100%) in the viability of A 549 lung cancer cells in a dose dependent manner.”

Journal of Medicinal Plant Research 2014

Antioxidant and Anticancer Activities of Moringa oleifera Leaves

“This study provides evidence that Moringa oleifera leaves possess antioxidant activity, as well as cytotoxic and chemoprotective properties.”
Moringa and DIABETES

Journal of Diabetes 2012
Evaluation of Antidiabetic and Antioxidant Activity of Moringa oleifera in Experimental Diabetes
“In conclusion, Moringa oleifera exerts protective effects against STZ-induced diabetes.

Evaluation of Anti-Hyperlipidemic Effect of Aqueous Leaves Extract of moringa oleifera...
“The present study reveals that aqueous extract of Moringa oleifera leaves has significant hypoglycemic (glucose lowering) and anti-diabetic potential.”

British Journal of Pharmacology and Toxicology 2011
Effect of Ethanolic Leaves Extract of Moringa oleifera on Blood Glucose levels...
“The present study showed that ethanolic leaves extract of Moringa oleifera possessed hypoglycemic (glucose lowering) properties...”

Evaluation of Antidiabetic and Antihyperlipidemic potential of Aqueous Extract of Moringa oleifera...
“The study clearly reveals that aqueous extract of Moringa oleifera leaf possesses potent antihyperglycemic and antihyperlipidemic effect...”

BioMed Research International 2015
“The Antidiabetic Effect of low Doses of Moringa oleifera...”
“Moringa revealed a safe and excellent antidiabetic activity...”
Moringa and Hypertension

Phytotherapy Research 2006
Pharmacological Studies on Hypotensive and Spasmolytic Activities of Pure Compounds From Moringa oleifera

“These data indicate that the direct depressant action of these compounds exhibited on all the isolated preparations tested is probably responsible for its hypotensive and bradycardiac effects...”

Chinese Journal of Physiology 2012
“In conclusion, the Moringa oleifera extract successfully attenuated the development of pulmonary hypertension...”

International Journal of Phytomedicine 2 2010
Medicinal Uses and Pharmacological Properties of Moringa oleifera

“The Moringa leaf juice is known to have a stabilizing effect on blood pressure.”

The Moringa An Online Magazine
Hypertension and Moringa: A Comprehensive Treatment for High Blood Pressure

“The role of Moringa oleifera plant in treating high blood pressure has long been known to practitioners of ayurveda, the traditional medicine of India.”

Jordan Journal of Biological Sciences 2012
The Effect of Moringa oleifera Leaves on Blood Parameters...

“The results of this study supported the reports about Moringa oleifera in having medicinal effect in curing some health problems associated with nutritional status and this was indicated in this study by its positive effect on some blood parameters and body weights...”

Moringa and Hypertension
Moringa and CHOLESTEROL

Effects of Moringa oleifera lam. Aqueous leaf extracts on Follicle Stimulating Hormone and Serum Cholesterol...

“The observed cholesterol reducing action of the crude leaf extract of Moringa oleifera indicates that this leafy vegetable possesses some potential medicinal value and could validate and explain its ethnomedicinal use on the obese & heart disease patients…”

Brazilian Journal of Pharmacognosy 2010:

Hypolipidemic Activity of Moringa oleifera Lam., Moringaceae....

“Moringa oleifera was found to increase the excretion of fecal cholesterol.”

Saudi Journal of Biological Sciences 2008

“Comparison of Moringa oleifera Leaves Extract with Atenolol on Serum Triglyceride, Serum Cholesterol, Blood Glucose, Heart Weight, Body Weight…”

“From the present study we revealed that the leaves extracts of Moringa oleifera with atenolol has profound hypolipidemic (cholesterol lowering) activity.”


Journal of Ethnopharmacol 2008

Hypolipidemic Activity of Moringa oleifera Lam., Moringaceae....

“It was concluded that the leaves of Moringa oleifera have definite hypocholesterolemic activity…”

Journal of Ethnopharmacology 2000

Hypocholesterolemic Effects of Crude Extract of Leaf of Moringa oleifera Lam...

“At 12 weeks of treatment, it significantly lowered the cholesterol levels and reduced the atherosclerotic plaque formation…”
Moringa and ASTHMA

Journal of Dietary Supplements 2009
Investigation into the Mechanism of Anti-Asthmatic Action of Moringa oleifera.

“Our data suggests inhibition of the immediate hypersensitive reaction, histamine release, and the infiltration of various inflammatory cells as possible antiasthmatic mechanisms of action.”

Myanmar Medicinal Plant Data Base: Ministry of health Department of Traditional Medicine

“Moringa oleifera is used for emphysema of the lungs as well as asthma.”

Indian Journal of Pharmacology: 2008
Antiasthmatic Activity of Moringa oleifera Lam: A Clinical Study

“Twenty patients of either sex with mild-to-moderate asthma were given finely powdered dried seed kernels in dose of 3 g for 3 weeks....” “Treatment with the drug for 3 weeks produced significant improvement in forced vital capacity, forced expiratory volume....” “The results of the present study suggest the usefulness of Moringa oleifera seed kernel in patients of bronchial asthma.”

Oriental Pharmacy and Experimental Medicine 2008
Investigation into the mechanism of action of Moringa oleifera for its anti-asthmatic Activity.

SUMMARY: “Our data suggests that antiasthmatic activity of Moringa oleifera seed kernels may be due to its bronchodilator, anti-inflammatory, mast cell stabilization and antimicrobial activity.”

International Journal of Toxicology 2009
Inhibitory Effect of n-Butanol Fraction of Moringa oleifera Lam Seeds...

“Thus, Moringa oleifera n-butanol possesses an antiasthmatic property...”
**Moringa and ULCERS**

**Trees for Life Journal 2005**
*Peer reviewed: John Hopkins School of Medicine*

“H. pylori is a major cause of gastritis, and of gastric and duodenal ulcers, and it is a major risk factor for gastric cancer. Cultures of *H. pylori*, it turned out, were extraordinarily susceptible to Moringa compounds having antibiotic activity against *H. pylori* at concentrations up to 1000-fold lower than those which had been used in earlier studies against a wide range of bacteria and fungi.”

---

**Journal of Pharmaceutical Science and Bioscientific Research 2013**

Evaluation of Antiulcer Activity of Moringa Oleifera Seed Extract

“The results suggested that ethanolic extract of Moringa oleifera possesses significant antiulcer activity.”

---

**International Research Journal of Pharmaceuticals 2012**

“Anti-Ulcer and Antioxidant Activity of Moringa oleifera (Lam) Leaves...”

“The said extract of *Moringa oleifera* lam. was found to decrease ulcer and acid pepsin secretion.”

---

**An Herbal and Nutritional Guide for Kenyan Families 2006 TICAH**

For use on stomach ulcers:

“Moringa leaf infusion Dissolve 1 tsp dried and powdered leaves in a glass of hot water. Drink 2 x daily...”

---

**African Journal of Traditional, Complementary and Alternative Medicines 2006**

PHYTOCHEMICAL SCREENING AND ANTIULCEROGENIC EFFECT OF *MORINGA OLEIFERA* AQUEOUS LEAF EXTRACT

“Pretreatment with Extract 200, 300 and 400 mg/kg bw reduced the characteristic lesions...”

“The effects observed could be due to the action of one or more of the phytochemicals present in the leaf extract.”
The results indicated that *Moringa oleifera* had higher percentage of calcium than spinach and sweet potato leaves.

"In conclusion, methanolic extract of *Moringa oleifera* on SaOS2 cell line affirmed the beneficial effects and thus indicates its potential in preventing osteoporosis."

"In a plant, calcium is naturally bound with other minerals, vitamins, proteins and phytonutrients. This nutritional entity contains a “code,” if you will, that tells the body it is safe to absorb and directs the body to store the calcium in the bones."

"The results indicated that *Moringa oleifera* had higher percentage of calcium than spinach and sweet potato leaves."
Moringa and ALZHEIMER’S

**International Journal of Current Pharmaceutical Research 2013**

“Role of Moringa oleifera on Brain Electrical Activity…”

“Thus the findings are that the aqueous leaf extract of this plant results significant neuroprotection in the level of antioxidant status…”

**Annals of Neurosciences 2005**

Effect of Moringa Oleifera in Experimental Model of Alzheimer’s Disease: Role of Antioxidants.

“Treatment with Moringa oleifera leaves extract for 14 days improve RAM performance significantly increasing the correct choices three days after surgery by increasing and decreasing the latency time…”

**Journal of Neuroscience in Rural Practice 2011**

Effect of Plant Extracts on Alzheimer’s Disease: An insight into Therapeutic Avenues

“It has been found recently that Moringa oleifera leaf extract which is not toxic even at higher concentration levels, enhances memory via nootropics activity…”

**Oxidative Medicine and Cellular Longevity 2013**

Moringa oleifera Mitigates Memory Impairment and Neurodegeneration in Animal Model of Age-Related Dementia

“Our data suggest that Moringa oleifera leaves extract is the potential cognitive enhancer and neuroprotectant.”

**Indian Journal of Medical Research 2008**

Alteration of Brain Monoamines & EEG Wave Pattern in Rat Model of Alzheimer’s Disease & Protection by Moringa oleifera

“After treatment with Moringa oleifera leaf extract, the monoamine levels of brain regions were restored to near control levels. Our findings indicated that Moringa oleifera might have a role in providing protection against Alzheimer’s disease…”
Moringa and CARBON SEQUESTRATION

Bill Gates on Climate Change Solutions

“Achieving that, he argues, will require an "ENERGY MIRACLE" — a technological breakthrough that creates an inexhaustible supply of carbon-free energy. Although he doesn't know what form that MIRACLE will take, he knows we need to think big.”

STATISTICS FROM THE FORESTRY AGENCY OF JAPAN 2009

Malunggay

Moringa and Carbon Dioxide Absorption

1 person emits 320kg of CO2/yr; it takes 23 Japanese Cedar trees 50 years to absorb this amount of CO2; it takes 2 Moringa trees 2 years to absorb this amount.

1 family car emits 2300kg of CO2/yr; it takes 160 Japanese Cedar trees 50 years to absorb this amount of CO2; it takes 10 Moringa trees 2 years.

* 1 household(??people) emits 6500kg of CO2/yr; 460 Japanese Cedar trees 50 years to absorb this amount of CO2; 26 moringa trees absorb this amount in 2 years etc.

AQ Abellon Quarterly 2010

First Step Towards Dedicated Energy Crop Cultivation

The project covers 130 acres of marginal land, and crops planted would include bamboo and Moringa oleifera. This is the first of its kind Indian demonstration project for growing species which will lead to better environmental conditions, and at the same time, earn CDM (Clean Development Mechanism) benefits. (Kyoto protocol for emission limitation)

TTO Climate Organisation

Sustainable solutions for the environment 2013

“The leaves of this tree (Moringa oleifera) have been proven to be of extremely high notional value and both the pods and leaves are high demand worldwide. Because of the carbon sequestration requirements, only pods will be harvested.”

Bioscience Discovery 2014

“Carbon Sequestration Potential of Tree Species...”

“Moringa oleifera species was found to be dominant sequestrated 15.775 tons of carbon...”
The flowers produce both pollen and nectar with bees as the main pollinators...
An International Quarterly Journal of Life Sciences Research 2013

Effects of Leaf Extracts of Moringa oleifera on Regulation of HYPOTHYROIDISM ..”

“The results of this study suggest that the extract may have beneficial effect on serum cholesterol concentration and a stimulant to thyroid functions.”

American Journal of Neuroscience 2012

Moringa Oleifera Leaves Extract Attenuates MALE SEXUAL DYSFUNCTION

Conclusion: “Moringa oleifera can be the potential sexual enhancer particularly for acute and short term application.”

International Journal of Research in Medical and Health Sciences 2013-2014

“Hepatoprotective Effects of Moringa oleifera Extract on LIVER…”

“Ethanolic leave extract of Moringa oleifera has an appreciable ability to prevent damage to the liver.”

Nigerian Journal of Natural Products and Medicine 2009

“Curative Effect of Hydroalcoholic Extract of Leaves of Moringa oleifera lam. Against Adjuvant Induced Established ARTHRITIS.”

“From the results of this study, it can be concluded that Moringa oleifera leaves possess some anti-arthritis properties.”

Applied Microbiology and Brewing 2010—a Thesis

EVALUATION OF THE ANTIVIRAL ACTIVITIES OF GYNOSTEMMA PENTAPHYLLUM AND MORINGA OLEIFERA AGAINST THREE RNA VIRUSES

“The research has shown that the plants possess potent antiviral properties and could serve as possible sources of lead antiviral drugs against Yellow fever virus, Poliovirus and HIV.”
**International Journal of Green Pharmacy 2012**

*ANTIMIGRAINE Activity Study of Moringa oleifera Leaf Juice*

“It could be concluded that *Moringa oleifera* may be effectively used in the treatment or management of migraine.”

**Journal of Ethnopharmacology 2013**

*Studies on Neuropharmacological Profile of Ethanol Extract of Moringa oleifera leaves in Mice*

“The results partially justified the traditional use of the extract for the treatment of EPILEPSY.”

**International Journal of Medicine and Medical Sciences 2013**

*Effectiveness of Dry Moringa oleifera Leaf Powder in Treatment of ANAEMIA*

“The study showed dry *Moringa oleifera* leaf powder is promising in the management of anaemia.”

**Journal of Pharmacy & Bioallied Sciences 2014**

*Moringa oleifera Lam....: In Vitro Anti-sickling Activity*

Findings from the present study have indicated for the first time the antisickling potentials of the seed and flower of *Moringa oleifera*. This suggests the plant could be a valuable source of antisickling agents.

**Saudi Journal of Biological Sciences 2011**

*Protease Inhibitor from Moringa oleifera with Potential for use as a Therapeutic Drug*

“*Moringa oleifera*, belonging to the family moringaceae, recorded high level of protease inhibitor activity..”

**NUTRIENTS 2014**

*Faculty of Allied Health Sciences, Naresuan University*

*An Ethyl Acetate Fraction of Moringa oleifera Lam. Inhibits Human Macrophage Cytokine Production Induced by Cigarette Smoke*

“findings highlight the ability of MOEF to inhibit cytokines (IL-8) which promote the infiltration of neutrophils into the lungs and others (TNF, IL-6) which mediate tissue disease and damage.”
Journal of Ocular Pharmacology and Therapeutics 2013

“Retinoprotective Effects of Moringa oleifera via antioxidant, anti-inflammatory, and Anti-Angiogenic Mechanisms...”

Conclusion: “Our results suggest that Moringa oleifera may be useful in preventing diabetes and retinal dysfunction.”


Antihistaminic Effect of Moringa oleifera Seed Extract

“The glycoside Saponin was reported to possess mast cell degranulation inhibiting and anti-histaminic activity.”

Oxidative Medicine and Cellular Longevity 2013

Cerebroprotective Effect of Moringa oleifera against Focal Ischemic Stroke induced by middle Cerebral Artery Occlusion

Conclusion: This study has demonstrated that Moringa oleifera leaves extract is the potential neuroprotectant which is cheap and easy to approach

African Journal of Biotechnology 2010

Active Principle From Moringa oleifera Lam Leaves Effective Against Two Leukemias and a Hepatocarcinoma

“They were active against leukemia and hepatocarcinoma cells in vitro.”
BIBLIOGRAPHY

PURIFY WATER


E Lemetais (no date) The miracle tree with tremendous multipurpose activities: Moringa oleifera

MEAT AND MILK


Dr. ME Olson (2013) Cool Moringa research: Radek and Savage on calcium oxalate. The international Moringa Germplasm Research.

J Pace: Zija Verified Nutrient List.


Trees For Life International “Moringa Book.”

**NUTRIENT CORNOCOPIA**


J Pace: Zija Verified Nutrient List.

Wikipedia Listing of nutrient deficiencies & specifically malnutrition.


**MEDICINE**

Dr. Duke: Chemicals and their biological activities in: Moringa oleifera LAM. (Moringaceae) – ben nut, benzolive tree, drumstick tree, horseradish tree, jacinto (sp.), Moringa, West Indian Ben. Dr. Duke’s Phytochemical and Ethnobotanical Databases.


ANTIDIARRHEAL


DROUGHT SEASON


Partnership works together to establish miracle tree forests (2012) Mississippi Conference of the united Methodist Church.


E Lemetais The miracle tree with tremendous natural multipurpose activities, www.globalgiving.org


Jepsen, East Africa drought questions and answers. Action Aid Denmark.
**ANTIBIOTIC**


Shirley, Natural treatments for infectious diseases, drug-resistant bacteria. Shirley’s Wellness Café.


FYI. (2011) Moringa juice is a natural antibiotic.

**BREAST MILK**


MiracleTrees.org. Moringa for pregnant and lactating mother. Moringa oleifera nutrition. The Moringa tree, also known as mama’s best friend.


MOSQUITOS


Centers for Disease Control and Prevention. (no date provided) Anopheles mosquitoes.

BLINDNESS


DEWORMER


The Ghana Bulletin (2016) Moringa; the “Miracle Tree.”


**SOAP**


**OIL**


**ANTI-FUNGAL**


**HEALTHY ANIMALS**


Why East Africa is facing an animal feed “famine.”

GARDENS


INFLAMMATION


CANCER

PR Newswire, Moringa Source (2012) New study shows Moringa oleifera scores highest antioxidant content in food.


DIABETES


**HYPERTENTION**


Hypertention and Moringa: A comprehensive treatment for high blood pressure. The Moringa.


**CHOLESTEROL**


**ASTHMA**


62
Myanmar Medical Plant Database: Ministry of Health department of Traditional Medicine.


**ULCERS**


**OSTEOPOROSIS**


ALZHEIMER’S


GLOBAL WARMING


POLLINATION


V Kanthaswamy (2005) Studies on pollination and breeding behavior in Moringa(Moringa oleifera Lam) Veg Science 32(2) 187-188.


AREAS OF INTEREST

W Tabassum, AR Kullu, MP Sinha (2013) Effects of Leaf Extracts of Moringa oleifera on regulation of

DN Ezejindu, OO Udemezue, KC Chinweife (2013-2014) Hepatoprotective effects of moringa oleifera
extract on liver of wistar rats. International Journal of Research in Medical and Health Sciences. V 3 (5)
226-228

Lam. Against induced established arthritis in rats. Nigerian Journal of Natural Products and Medicine.
(V) 13.


oleifera against three RNA viruses. Applied Microbiology and Brewing. NNamdi Azikiwe University.
Completed Thesis.

Inteantional Journal of Green Pharmacy. V6(3) 204-207.

EU Madukwe, AL Ugwuoke, JO Ezeugwu (2013) Effectiveness of dry Moringa oleifera leaf powder in

AG Bakre, AO Aderibigbe, OG Ademowo (2013) Studies on neuropharmacological profile of ethanol

acetate fraction of Moringa oleifera lam. Inhibits human macrophage cytokine production induced by

antisickling activity on deoxygenated erythrocyte cells. Journal of Pharmacy & BioAllied Sciences. 4
(2):118-122.


